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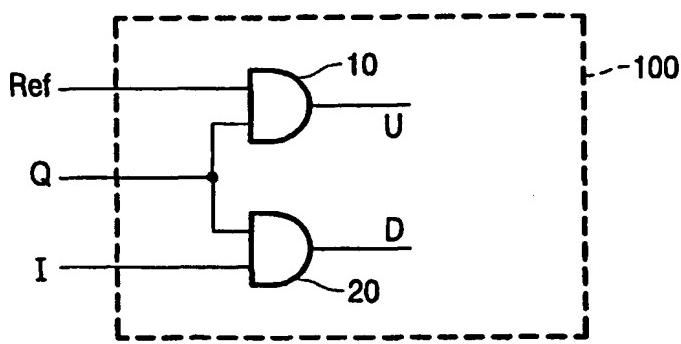
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(54) Title: PHASE LOCKED LOOP



(57) **Abstract:** A phase locked loop comprising a phase detector (100) for determining a phase difference between a reference signal (Ref) and mutually phase shifted signals (I, Q) to generate frequency control signals (U, D), the phase detector (100) comprising: means (10) for obtaining a first one of said frequency control signals (U, D) by binary multiplication of the reference signal (Ref) and one of the relative phase shifted signals (I, Q); and means (20) for obtaining a second one of said frequency control signals (U, D) by binary multiplication of the relative phase shifted signals (I, Q).